ATLAS Muon Database: Test of Conditions Data Flow

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Muon Test Beam Conditions Data

Current Status

- *Alignment*
  - Integrated in Test Beam AMDB files
  - Reconstruction-specific software to apply position changes
- *Calibration values*
  - Formatted Ascii data files
  - Reconstruction-specific software

Proposed Prototype

- *Test of POOL / Conditions DB / Athena IOV Service*
  - Test for H8 data
    - *D. Adams, J. Rothberg, S. Rosati, S. Goldfarb*
  - Motivation
    - *Solution for H8 needs*
    - *Potential long-term solution for conditions data*

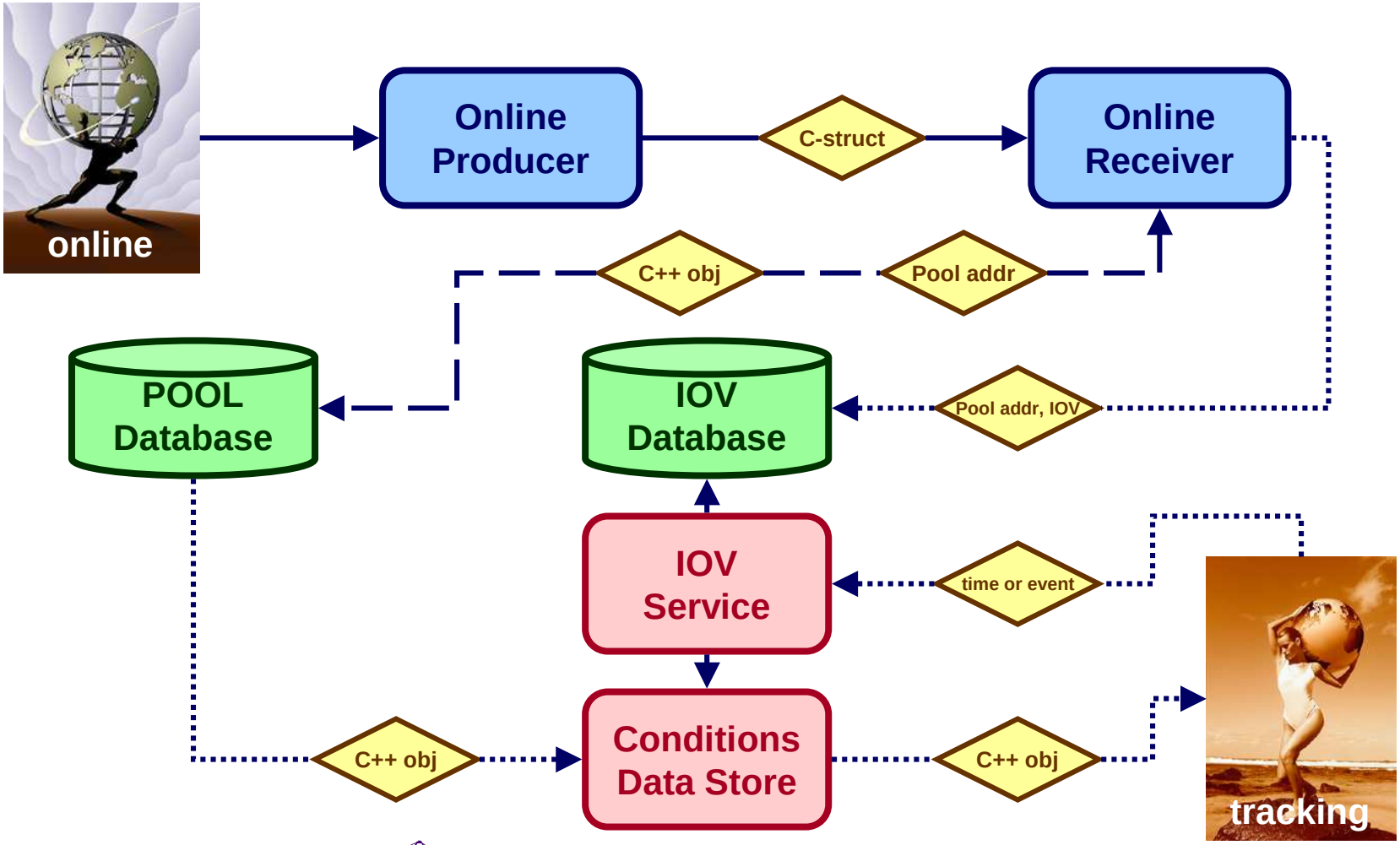
Muon Test Beam Conditions Data

Proposed Prototype (cont.)

- *Scenario*
  - Online “producer” generates c-struct of conditions data, timestamp
  - C-struct is sent to a “receiver” program via DIM
  - C-struct is converted to a C++ object
  - C++ object is written to Pool
    - *Pool address returned to receiver*
  - Pool address, T_{init} , T_{final} for object written to IOV Database
    - *Registered with Athena*
  - Athena IOV Service retrieves object on request by reconstruction
    - *IOV Sevice handles Event <--> Time, cache management*
- *Admitted*
  - Simplistic IOV handling at first
    - *Just a prototype, probably sufficient for test beam*

Muon Test Beam Conditions Data

Flow of the Conditions Data



Muon Test Beam Conditions Data

Next Steps

- *Jump into the POOL*
  - Just awaiting instructions and perhaps the proper swim suit
- *Construct IOV*
  - Current object's timestamp for t_0
  - Next object's timestamp for t_f
- *Register Address, IOV with IOV service*
  - Is the IOV service ready for this?
    - *We are coming with Address to Pool, IOV*
    - *How do we express the data type? "MdtTimeSpectra"*
  - Is Athena ready for this?
    - *Can I just say "Give me MdtTimeSpectra for this event"?*